TECHNICAL BOOK REVIEW INDEX

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JULIA C. WALLACE, *Editor*

Volume 14 **November, 1948** **Number 9**

THE purpose of the Technical Book Review Index is primarily to identify reviews in current scientific, technical, and trade journals; secondarily, when feasible, to quote from these reviews. In the evaluation of scientific and technical books, reviews constitute the best existing source of information. The service of the Technical Book Review Index is thus in the field of evaluation, rather than in competition with existing publications which announce new and forthcoming books, list books by subjects, or supply bibliographic information. Each quotation immediately follows the name of the journal from which it is taken. Obviously, these brief extracts, detached from the context, must not be accepted as conclusive. Except for the correction of obvious errors, the bibliographic information is as given in the reviews. It is, therefore, in many cases incomplete and in some cases probably inaccurate.

Advances in food research; edited by E. M. Mrak and G. F. Stewart. v.1. 459p. 1948. Academic Press, New York, $7.50.

Food industries, Sept. 1948, p.205. ⅔ col.

"The first volume in a projected series designed to provide a medium in which every phase of food research may be exhaustively and critically reviewed on a continuing basis. The rapid and widely spread expansion of food research, in recent years, has brought about a trend toward specialization. And that trend is causing a loss of contact between workers in the various phases of the science. A coordinating and integrating outlet, such as is represented by this book, has therefore become highly necessary."

Wines & vines, Aug. 1948, p.44. 12 l.

"An excellent book for anyone interested in the wider field of Food Technology. Ten different subjects are reviewed by authorities in the field. The review in each case is extremely comprehensive, covering not only current researches, but also virtually all past literature on the subject. Over 100 references are listed for virtually each of the reviews."

Angus-Butterworth, L. M. Manufacture of glass. 274p. 1948. Pitman, New York, $6.

Glass industry, Sept. 1948, p.520. ⅔ col.

"A comprehensive treatise has been prepared by the author presenting the manufacture of glass from the early Egyptian period through the years to present day uses."

National glass budget, July 24, 1948, p.14. ⅓ col.

"A comprehensive treatise, dealing with the history and development of the industry from the earliest Egyptian glass to that of the present day . . . Also discusses various manufacturing processes, and general and industrial applications. Scientists, manufacturers and others employed in the glass industry will find this book worthwhile reading, and everyone who appreciates beauty as represented in various forms of glass work will find it absorbingly interesting."

Anthony, Herbert D. Science and its background. 304p. 1948. Macmillan, New York, $3.

Chemistry & industry, Sept. 11, 1948, p.589. ⅔ col.

"In the first two-thirds of the book, covering the period from prehistoric days until about 1750 . . . a very readable, logical and interesting account is given of the great thinkers and scientists of classical and medieval days . . . The final third . . . is not so satisfactory. This history of all the natural sciences, of medicine and engineering, together with a background of politics, philosophy, and geography, from about 1750 to the present day, is compressed into about a hundred pages. This results inevitably in a very condensed and disjointed account. Furthermore, too much stress has been laid on developments in the last five years and too little on American contributions to scientific knowledge and achievement . . . Well written, well illustrated, and lives up to a pre-war production standard which it is a pleasure to meet again in this country." *L. M. M.*

Nature, Sept. 4, 1948, p.354. ⅔ col.

"The work . . . is eclectic in its methods: it envisages the story of science through history, and, moreover, a history which takes account, as all histories should, of human development and the evolution of social institutions . . . Deals with many subjects. The author has succeeded in being succinct without being superficial by a careful selection of the most important topics for his purpose . . . Should be read by every sixth-form pupil, whether of arts or science. For the lay-reader requiring a short, readable and accurate account of the growth of science in its human context, it is difficult to see how it could be improved. The production . . . in general and its pictures and time-charts in particular reach a high standard." *W. L. Sumner.*

Aspley, John Cameron, & Whitmore, Eugene, ed. Handbook of industrial relations. Ed.3. 1254p. 1948. Dartnell, Chicago, $10.

National safety news, Oct. 1948, p.124. ½ col.

"For the considerable number of industrial relations men interested in accident prevention, this 56 chapter volume will emphasize the importance of safety and provide a reference to sources of more detailed information . . . Would be more valuable to the safety engineer who is interested in industrial relations and who has the imagination to use the comparatively more exhaustive treatment of industrial relations to further his safety program . . . The public relations value of safety is cited but one would expect more emphasis on the important relationship of the industrial relations in a volume of this size." *A. M. Baltzer.*

Textile world, Oct. 1948, p.244, 248. ⅔ col.

"Contains revisions to include all changes brought about by the Taft-Hartley law . . . Approaches employee relations much more realistically than was possible or necessary in the first edition . . . A total of 56 chapters deal with every aspect of personnel department objectives, organization, and policies . . . Comprehensive in its coverage of each topic, and authoritative contributions on various subjects have been made by well-known experts . . . Should find a place in every textile mill as a basic work on sound personnel policies and procedures."

Attwood, C. Practical five-figure mathematical tables. 74p. 1948. Macmillan, New York, 3s. net.

Machinery (London), Sept. 16, 1948, p.452. ⅝ col.

"Marks a new departure in the presentation of low-priced mathematical tables, and the compiler has done his work in a conscientious manner with due regard to the wide circle of computers who are likely to use such tables. The notes at the back of the book are very enlightening, especially those on the reliability of mean proportional parts."

Mechanical world, Sept. 24, 1948, p.366. ⅔ col.

"An unusual degree both of accuracy and extent of usefulness is provided at a very economical price in this clearly printed and compact volume. The proportional parts in particular have received careful attention, and where they have to be subtracted they are printed in red to distinguish them readily from those in black which have to be added. A useful range of material is presented."

Bateman, John H. Introduction to highway engineering. Ed.5, revised. 538p. 1948. Wiley, New York, $5.50.

Highway builder, Sept. 1948, p.9. ½ col.

"Retaining the author's original aim of presenting the fundamental principles and processes involved in highway engineering, the book is completely up to date, with revised text matter, tables and appendixes, and with new illustrations and problems. The historical background of highway engineering and descriptions of highway systems are followed by discussions of subgrade soils, various base and surface courses, concrete and other pavements, planning and constructing highways to eliminate traffic problems, and many other topics of interest to engineers and contractors."

Baver, L. D. Soil physics. Ed.2. 398p. 1948. Wiley, New York, $4.75.

Fertilizer review, Sept.-Oct. 1948, p.15. 11 l.

"Written primarily for the graduate student. The various phases of soil physics are discussed from the point of view of the teacher explaining them to his class. Simple analogies and often extremely detailed discussions have been used to illustrate significant points. Selected references are given at the end of each chapter. The teacher of soil physics will find the volume worth while in his work."

Soil science, Aug. 1948, p.162. 10 l.

"This book is probably the best in its field . . . The new material has to do with electron micrographs of clay particles, effect of microorganisms on soil structure, some thoughts on plowing, and the effects of rain on soil erosion. The lists of references that are appended to the several chapters have been lengthened considerably."

Bedford, Thomas. Basic principles of ventilation and heating. 402p. H. K. Lewis, London, 25s.

Heating and ventilating, Oct. 1948, p.144. ⅝ col.

"One chapter alone — that on Scales of Warmth—is, in this reviewer's opinion, worth the price of the book. Dr. Bedford has impartially and thoroughly discussed and compared the American effective temperature, the British equivalent temperature, and the French resultant temperature scales. Other chapters treated in a most understandable and interesting manner in separate chapters are body heat production, warmth and comfort, sensations of warmth and cold, stimulating environments, air quality, measurement of ventilation, work at high temperatures, and effects of atmospheric conditions on accident frequency and sickness. On the application side are chapters on natural ventilation, mechanical ventilation, domestic heating, panel heating, convection heating, and air conditioning."

Heating, piping & air conditioning, Oct. 1948, p.198. ⅝ col.

"Dr. Thomas Bedford deals with the subject in terms of basic human needs. No attempt has been made to give a detailed treatment of engineering practice, for (as the author says) many works on engineering aspects are available. His discussion of fundamental principles should be of interest to engineers, architects, public health officials, and others concerned with the control of environment. It should be remembered that the author, a member of the scientific staff, Medical Research Council, and an honorary member of the Institution of Heating and Ventilating Engineers, is English and that many of his remarks reflect the current thinking and practices in his country."

Beitler, Samuel R., & Lindahl, E. J. Hydraulic machinery. 218p. Irwin-Farnham, Chicago, $3.50.

Plant engineering, Sept. 1948, p.57. ⅝ col.

"Based . . . on notes used in teaching courses in hydraulic machinery to upperclass students in Mechanical Engineering . . . Well illustrated especially with phantom views and cross-sections of practical, operating machinery and should be quite valuable to practicing engineers in

studying this equipment . . . For the practicing engineer, the fundamentals of fluid mechanics are reviewed to help him in solving specific problems in that field."

Bell, A. E. Modern practical chemistry. Ed.2. 224p. 1947. Longmans, New York, $2.25.

Chemical and engineering news, Sept. 13, 1948, p.2717. 1 col.

" 'Designed to meet the needs of students who are studying chemistry for such examinations as Higher School Certificate, London Intermediate, and First M.B. examinations.' Those persons responsible for planning curricula in so-called terminal courses in American technical high schools, institutes of applied science, and technical institutes would do well to study the material found in this book . . . An examination of this textbook is recommended to teachers of elementary chemistry in American colleges and universities." *Raymond E. Kirk.*

Bennett, H., ed. Chemical formulary. v.8. 448p. 1948. Chemical Pub., Brooklyn, $7.

Oil, paint and drug reporter, Aug. 16, 1948, p.55. ⅛ col.

"Presents how-to-make-it formation—all new—on something like 1,500 items, ranging from abrasive diamond dust to zein dispersion . . . A useful storehouse of knowledge on all sorts of things, from making banana muffins to killing weeds, from curling hair *in situ* to feeding plants hydroponically. It is . . . the sort of a book that everybody likes to poke about in now and then . . . The 'stories,' albeit short, are interesting from a variety of angles . . . It presupposes that the one who is going to use it knows something about putting things together. It makes no attempt to educate in the technical touch—but it provides plenty for the application of that qualification . . . Everything, but the know-how, is right there for the formulator who wants to go to work at almost anything."

Science counselor, Sept. 1948, p.102. ⅛ col.

"A storehouse of information and data and ideas as well as formulas. Manufacturers as well as small scale workers will find it of value." *H. C. M.*

Welding journal, Sept. 1948, p.756. ⅔ col.

"Contains thousands of additional, new, practical and tested formulae, some of which have never before been published. Behind the contents . . . stand the integrity and scientific knowledge of some of America's leading industrial and research chemists. The formulae you will find here are the result of long years of research and millions of dollars spent on experiments. This book will bring you a great fund of ideas, information, data and formulae that would otherwise be accessible only after consulting dozens of books. It will keep you abreast of the latest developments and trends which affect all business and industry. Whatever your formulation problems may be, you are sure to find invaluable information here whether you are a chemist, engineer, executive, manufacturer or layman."

Bergmann, Ernst David. Isomerism and isomerization of organic compounds. 138p. 1948. Interscience Publishers, New York, $3.50.

Cereal chemistry, Sept. 1948, p.366. ¼ p.

"A very interesting and well-written book which brings the reader to the forefront of research in these particular fields of organic chemistry and the theories involved therein . . . Contains an excellent literature survey for the specialist and . . . demonstrates in a striking manner the excellent results which are derivable from the application of physical methods to organic chemistry . . . Written not with the object of covering the whole field but with the intention of stimulating thought and discussion. This it certainly accomplishes and the reviewer can recommend it both to research students and teachers." *F. Smith.*

Chemical and engineering news, Sept. 27, 1948, p.2918. 1 col.

"Although the book contains an interesting survey of several aspects of organic chemistry, it is neither entirely up to date nor entirely authoritative . . . The book (in the opinion of this reviewer) can be recommended only as a bibliography; even for this purpose its incompleteness detracts considerably from its value." *G. W. Wheland.*

Journal of chemical education, Oct. 1948, p.583. ⅝ col.

"An extremely interesting presentation of certain aspects of isomerism and isomerization, and although it is incomplete most readers should find ample 'food for thought.' The discussions are usually of a critical nature, and not merely a compilation of facts and phenomena. All, or part, of the book is obviously ideal material for an organic seminar. However, to attain a full appreciation and comprehension of the subject matter, it seems desirable to have a reasonable knowledge of physical organic chemistry . . . There are numerous references to the literature, and pertinent material from the recent literature (to April, 1947) has been included . . . Contains a brief subject index."

Journal of physical & colloid chemistry, Oct. 1948, p.1276. ⅔ p.

"Provides an extremely interesting introduction to isomerism and isomerization. Ernst Bergmann is an expert in this field and many of the examples cited are from his work . . . The book, however, suffers from two serious defects. First, numerous errors occur in the formulas . . . Second, many of the theories presented are no longer generally accepted . . . In spite of these defects, the book is very stimulating if read critically. The paper is good and the binding excellent." *R. M. Dodson.*

Blasdale, Walter C. Cultivated species of Primula. 284p. 1948. Univ. of California Press, Berkeley, Calif., $7.50.

Natural history, Oct. 1948, p.341. ⅔ col.

"The larger part of the book deals with species and variations of *Primula,* botanically classified, with something of their individual history, geographic range, and characteristics . . . This attractive and well-illustrated volume is well worth consideration by every horticulturist. To the scientist not trained in taxonomy it gives a well-presented idea of the vastness and intricacy of just a single genus." *Henry K. Svenson.*

Borden, Perry A., & Thynell, G. M. Principles and methods of telemetering. 230p. 1948. Reinhold, New York, $4.50.

Gas age, Sept. 2, 1948, p.38. ⅓ col.

"A long felt need for a book covering the subject of telemetering has been answered in

this present work . . . Included are a bibliography of published material, a list of registered names and trademarks and a list of patents in telemetering and allied fields."

Oil and gas journal, Aug. 19, 1948, p.95. 9 l.

"Originally, the authors had the idea of gleaning data from manufacturers' catalogs, but this idea was early cast aside and as far as possible they established direct contact with responsible technical representatives of outstanding manufacturers, distributors, and users of such equipment—thus obtaining first-hand information for the book."

Steel, Sept. 20, 1948, p.152. ¾ col.

"This ambitious book on a relatively new science and art—that of reproducing at a convenient location measurements made at a remote point—represents, the authors state, a compilation of data from telemetering instrument makers rather than an original work on the subject. They admit that little of the material presented could not be obtained by the reader himself from the sources they have used; however, they have done an admirable job of digesting and condensing this material, and present it as engineers in the telemetering field with an eye to the features of technical interest in each instrument discussed. In addition to a profusion of photographs and diagrams of the instruments and their circuits, the book also contains a list of important patents in telemetering and allied fields as well as a bibliography covering periodicals, books and reports on the subject."

Burton, E. F., and others. College physics. 724p. 1948. Pitman, New York, $4.50.

American journal of physics, Sept. 1948, p.367. 1⅝ col.

"Intended for non-specialists in the sciences, who are studying physics as part of their training for an applied science like medicine or agriculture or as part of their general education . . . The emphasis in this text is on factual material rather than on theory and logical structure . . . Mathematical methods are amply and intelligently used . . . The text is clear and well written, and the many diagrams and illustrations are excellent. There are problems, largely of a numerical kind, at the end of most chapters, with sample problems and solutions in some cases. Tables of numerical data are generously included throughout." *Richard Schlegel.*

Butterworth, L. M. Angus-. See Angus-Butterworth, L. M.

Carlson, Anton J., & Johnson, Victor. The machinery of the body. Ed.3, revised. 639p. 1948. Univ. of Chicago Press, Chicago, $4.50.

Science counselor, Sept. 1948, p.101. ½ col.

"This third edition of a well-known text in physiology, intended for students with little or no experience in science, has many desirable features not found in other works to be used in the elementary course . . . This text uses for illustrations scenes taken from films in the Chicago biology series. Thus the student has the opportunity to correlate with reference reading what he has seen in the film . . . Written in an easy to read style reminiscent of a personal chat. The more elementary material is presented under sections not starred and is complete within itself, while starred headings delve more deeply into the subject to provide further facts for the interested student . . . The authors deal with a complete range of physiological behavior and approach their material from the evolutionary point of view." *Alfred Halpern.*

Carter, Gardner L., & Cole, J. W. Laboratory course in general chemistry. Ed.3. 221p. 1948. Van Nostrand, New York, $2.75.

Chemical and engineering news, Sept. 13, 1948, p.2716. ¾ col.

"This is indeed a unique laboratory manual. Actually it is a textbook within a laboratory manual. As such, it is a textbook in which the student is directed, guided, led, and coaxed, by short steps, through the medium of a very large number of experiments, exercises, directions, back references, cross references, statements of fact, discussion of principles, enumeration of data, questions, and more questions . . . It appears to be a very good manual. It has a very large number of well-related experiments arranged in a very logical sequence, but as an educational tool it does not appear to be nearly as revolutionary as the authors would have one believe." *C. H. Sorum.*

Cawadias, A. P. Clinical endocrinology and constitutional medicine. 368p. 1948. Muller, London, 42s. net.

Nature, Oct. 2, 1948, p.512. ⅔ col.

"An interesting and useful book. The author has made an extensive survey of the clinical conditions that can be attributed to mal-functioning of the endocrine organs, and has based his observations upon a reasoned picture of the 'physiology and pathology of the neuro-endocrine systems' . . . Well written, and contains numerous interesting references to the older literature. References to recent advances in experimental endocrinology are, however, somewhat unnecessarily restricted. The illustrations are reproductions of drawings, and may not be to the taste of all readers."

Chwistek, Leon. The limits of science; translated from the Polish by Helen C. Brodie and Arthur Coleman. 347p. 1948. Harcourt, New York, $6.50.

Physics today, Oct. 1948, p.25, 35. 2 col.

"The present work is a translation . . . of Chwistek's most complete exposition of big views both on the foundations of mathematics and on a large class of issues that arise in the logical analysis of physical science. Moreover, in addition to a helpful introduction by Miss Brodie, the present edition of the book contains much new and improved material supplied by Chwistek just before the outbreak of hostilities in 1939. Although the translation is not uniformly smooth and is occasionally even obscure, readers of English will be grateful for this opportunity to become better acquainted with Chwistek's major ideas . . . But while the book is undoubtedly stimulating, it falls short of being genuinely enlightening. Part of this failure should perhaps be credited to Chwistek's somewhat oriental style of writing, for he does not hesitate to mix what purports to be scientific argument with irrelevant and sometimes autobiographical asides . . . Even the technical discussions of logic and mathematics suffer from fundamental unclarities . . . In matters dealing with fundamental questions in the

philosophy of science, he makes his disagreements more explicit than his own conceptions . . . And what is perhaps the most represensible feature of the book, Chwistek permits himself to decide on purely philosophical issues in terms of what he assumes to be the social consequences of a technical doctrine." *Ernest Nagel.*

Science progress, Oct. 1948, p.765. ⅙ p.

"The appearance of this book is an event of deep significance; exactly why this should be so will only be fully manifest after close study. Meanwhile, two straightforward reasons can be discerned. Firstly, never before has a complete work of one of the greatest of Polish theoreticians become available in any 'international' language. Secondly and consequentially, a sizable fraction of their monumental achievements in logistics and metascience—almost unknown hitherto in the West—will henceforward occupy a conscious place in the forefront of contemporary thought." *F. Ian G. Rawlins.*

Cockroft, J. D., and others. Atomic energy; its international implications. 128p. 1948. Royal Institute of International Affairs, 542 Fifth Ave., New York, $1.25. (Chatham study group discussion.)

Chemical and engineering news, Sept. 13, 1948, p.2716. ⅝ col.

"Each of the 12 chapters was written by an English expert in the field covered . . . Written in such form that it should be entirely comprehensible to any educated layman. It is temperate, logical, and factual in treatment. The reviewer had considerable pleasure in reading the book, which appears to him to be one of the best treatments of its kind among a great number now available . . . The body of the book is in two parts. The first part takes up the whole scientific background, and the second part considers the question of control of atomic energy . . . Terminates with an excellent bibliography of official reports and statements and three appendixes in the form of charts showing the best thought of these British scientists on the subject of control." *Malcolm M. Haring.*

Creamer, Walter J. Elements of electrical engineering. 344p. 1948. McGraw, New York, $4.

Electrical world, Sept. 11, 1948, p.180. ⅛ col.

"Planned as the text for a transitional course carrying the student over from conventional college mathematics and physics courses to more advanced courses in electrical engineering . . . Presents basic engineering principles clearly and may serve as an aptitude test which, if passed with credit, should insure the student success in more advanced work. Non-linear circuit elements have been stressed. Properties of materials have been frequently pointed out. In dealing with fields, the concept of potential gradient has been stressed. Basic motor and generator theory has been given unified presentation in the chapter devoted to electrodynamic principles."

Electronics, Oct. 1948, p.271. ½ col.

"The transition from abstract science courses to applied engineering courses is made less abrupt by this book. It contains a fusion of basic and applied material, presented to guide students in learning to approach concrete problems from their background of fundamental concepts . . . This book is also indicative of the growing importance of electronics . . . Also, in this book the bulk of which is devoted to electric machines the concluding chapter is on electronics for both communication and industrial applications." *F. H. R.*

Crouse, William H. Understanding science. 190p. 1948. McGraw, New York, $2.20.

Science counselor, Sept. 1948, p.101. ⅛ col.

"Even pupils who think they dislike science will find this book easy to take. They will approve its plain clear language, its disarming approach, its striking analogies, its gay, well-captioned illustrations. Every page shows that the writer knows students as well as science. He discusses briefly and simply such basic scientific phenomena as heat, electricity, light, and atomic structure. Then he considers the modern inventions that are related to or based on them—complex ones such as the atomic bomb, radar and television, as well as the telephone, phonograph, photography, the internal combustion engine, and others encountered every day and about which most people know so little." *H. C. M.*

Cruess, W. V. Commercial fruit and vegetable products. Ed.3, revised. 906p. 1948. McGraw, New York, $8.50.

Food industries, Oct. 1948, p.201. ⅝ col.

"Here is a long looked for edition of this notable work . . . Developments in food and vegetable processing during the past ten years have been on a scale with the world events of the period. The stimulus of war brought changes in canning, freezing and dehydrating that would normally have been spaced over a generation or more. Most of these changes and developments are recorded here. They are represented, not only by advances in the scientific knowledge of food processing, but by great improvements in basic processes and by new and improved equipment . . . One new chapter—Plant Sanitation—has been added . . . A valuable addition to the library of the food manufacturer . . . Will also be of value to those responsible for food plant operations, whether he be factory manager, foreman or chemist."

Quick frozen foods and the locker plant, Oct. 1948, p.36. ⅝ col.

"Technological and scientific developments made during the past eight years are discussed and all the information brought up to date. Among the chapters which have been considerably revised are the chapter on frozen-pack foods and the chapter on packaging. Material on the mechanical handling and pre-treatment of fruits and vegetables has been added and a chapter on plant sanitation is now included."

Currie, J. R., & Mearns, A. G. Hygiene; a manual of public health. Ed.3, revised and enlarged. 724p. 1948. Livingstone, Edinburgh, 35s.

Journal of the Royal Sanitary Institute, Sept. 1948, p.571. ½ p.

"Students preparing for the examinations for the certificate and diploma in public health will find all the information required, which is very useful as reference for medical officers and sanitary inspectors. The work, of course, deals with all the usual topics which come under the heading of public health . . . It is so well known as a textbook and so much appreciated that it is quite unnecessary to mention these

in detail . . . Excellently produced both in text and illustrations, and, in addition to its other attractions, is most readable."

Currier, A. J., & Rose, A. General and applied chemistry; a brief college course. 275p. 1948. McGraw, New York, $3.

Chemical and engineering news, Oct. 18, 1948, p.3152. ¾ col.

"In addressing this textbook to the student whose curriculum requires only a brief course in general college chemistry, the authors have attempted a presentation of basic chemical facts and their technical applications which is unencumbered by the mass of detail which renders so many beginning books almost encyclopedic in nature. In this they have succeeded admirably, and the book gives a readable and generally easily understandable discussion covering chemical principles, the non-metallic elements, and the industrially important metallic elements. The average student should have little difficulty in following most of the material and in understanding the applications, both scientific and technical, which are presented . . . Teachers seeking a text for nontechnical classes in beginning chemistry might profit by examining this one." *Therald Moeller.*

Chemistry & industry, Sept. 11, 1948, p.590. ⅛ col.

"Intended as a one-year course in chemistry for students who are taking applied sciences, only distantly connected with chemistry. Since the standard aimed at . . . is somewhat lower than that of our Higher Schools Certificate, it cannot be expected to appeal to a very wide section of university students in this country. The pure chemistry is of a very elementary standard whilst the applied chemistry is little more than the general knowledge included in elementary text-books on chemistry. On the other hand, this book may prove to be useful to the older man who finds himself involved in chemistry for the first time. For this purpose it is well suited, being carefully planned and illustrated to make it very readable." *P. H. C.*

Curtis, Harry P. Testing of yarns and fabrics. Ed.4. 241p. 1948. Pitman, London, 10s. 6d.

Journal of the Textile Institute, Aug. 1948, p.P504. 11 l.

"Comparison of this . . . edition with the 2nd . . . reveals little change beyond the addition of a chapter on machines for the determination of the bursting strength, resistance to abrasion, shearing strength and thickness of fabrics. The small extent of the changes may be taken as an indication that the book continues reasonably to serve the purpose for which it was designed. One would have liked to see some reference to the suggestions for a universal yarn count and to some of the new machines for testing cloth which have appeared since the outbreak of war in 1939. Presumably the treatment has never been intended to be highly critical. The book doubtless serves a useful purpose and the publisher and printer are justified in considering their work very well done." *W. J. H.*

Dooley, Marion S., & Rappaport, Josephine. Pharmacology and therapeutics in nursing. 444p. 1948. McGraw, New York, $3.75.

American journal of nursing, Oct. 1948, p.40. ½ col.

"A modern and up-to-date text, stripped of all superfluous details non-essential to the nurse which in the past have made the subject of pharmacology difficult and burdensome to many students of nursing. It is not only up to date in content concerning recent developments in pharmacology and clinical medicine, but it is also new in its 'functional' approach to the study of drug therapy . . . The book is well planned and the text is presented in a concise, interesting, and exceedingly readable manner . . . One of the best features of the text is its emphasis on nursing responsibility, and it should prove valuable to those teaching students of nursing." *Elizabeth S. Gill.*

Douglas, Lloyd V., and others. Modern business; an introduction to principles and problems. 427p. 1948. McGraw, New York, $3.50.

Journal of business education, Sept. 1948, p.47. ⅔ col.

"Concentrating upon background value, setting, and understanding, the authors have avoided details that have no place in the initial over-view to be given to the student. They have selected materials calculated to give a general picture of business in its basic function of supplying the economic needs of society. These materials are organized into main topic areas arranged to develop this general picture in logical sequence . . . The materials in this text are suitable for both business and non-business students. Certainly every useful, intelligent citizen should have an opportunity to profit by such a background understanding as would be thus afforded."

Dunham, Clarence W. Planning industrial structures. 481p. 1948. McGraw, New York, 36s.

Concrete and constructional engineering, Sept. 1948, p.279. 1⅓ col.

"The author's purpose is to show the influence of the characteristics of a building material upon the design of a structure, to help the reader to visualise structural action, and to enable him to acquire the 'practical' knowledge essential to the planning of a structure. This knowledge implies knowing what is structurally practicable, safe, and economical, and what is not. It may be felt that such knowledge can only be acquired by long experience, but the precepts given in this book . . . should appreciably assist the student and may act as reminders to experienced engineers."

Structural engineer, Oct. 1948, p.620. 1 p.

"This is a good book, as, indeed, might be expected from so experienced an author. It is refreshing to read that 'industrial buildings need not be displeasing in their appearance' and that 'it really costs little more to make a building neat and attractive.' It would have been even more refreshing to have read that the co-operation of the architect and engineer should begin at the beginning of the project rather than at some ill-defined intermediate stage when the plans have begun to develop . . . Ought to be in the library of every designer of industrial buildings." *F. R. B.*

Dunlap, Orrin E., jr. Understanding television; what it is and how it works. 128p. Greenberg, New York, $2.50.

Advertiser, Oct. 1948, p.30, 55. 2⅛ col. including an illustration.

"One of the most compactly comprehensive books yet written on this new miracle of science which is destined to have unpredictable impact on the world mosiac [sic] of sociology, education, entertainment and economics . . . Authentic, informative and—very easy to read and absorb . . . Sound, simple and illuminating—reflecting Dunlap's richly varied background . . . A comparatively small book—a pint-sized package with information of exploded atomic proportions . . . [Recommended] to every alert advertising and sales executive, each of whom needs a succinct knowledge of television in his plans for tomorrow; to every broadcaster, for whom a clear perspective of this new medium is imperative; and to every layman who prides himself on a knowledge of the truly significant developments in this complex modern life."

Broadcasting, Oct. 4, 1948, p.40. ⅛ col.

"Orrin Dunlap, Jr. . . covers a multitude of the every day questions asked about video. From the wave motion of light to operation of the image orthicon tube, Mr. Dunlap presents his complex subject in simple language . . . 'Testing Your Television I. Q.' presents a series of questions and answers on all phases of video while the 'Television Glossary' gives definitions of a large number of words used in the field. A bibliography of books on television also is included."

Egloff, Gustav, & Hulla, George. Alkylation of alkanes. 3v. v.1: Patents on alkylation of alkanes. 1152p. 1948. Reinhold, New York, $20. (American Chemical Society. Monograph series, no.107.)

Petroleum processing, Oct. 1948, p.1017. ½ col.

"Comprises a collation of abstracts or digests on all available patents on this subject, U. S. and foreign, up to about June, 1947, totalling something over 800 . . . Unfortunately the book will have relatively limited use as a reference tool, for which purpose it was primarily designed, because of the lack of a proper index. The patents are *not* listed in chronological arrangement by patent number in what is called the index; this section is at most a repetition of the contents, listing each patent as it appears in the book, chronologically by page number. As a result, the reader has no easy method for locating any specific information."

World petroleum, Oct. 1948, p.78. ⅜ col.

"Classifies the patented processes according to the catalyst used. Then follows thermal alkylation of alkanes and subsidiary operations of the prior formation of iso-alkanes and alkanes, and the steps of defluorination, isomerization, polymerization, hydrogenation, dehydrogenation, cyclization and reforming. Miscellaneous processes involving various reactants and a chapter on demethylation conclude the work, which is too vast for this reviewer to attempt to describe in detail. It is a valuable reference book."

Ellis, J. C. B. Feeding of farm livestock. Ed.2, revised. 271p. 1947. Lockwood, London, 18s. net. (Agricultural and horticultural series.)

Nature, Sept. 18, 1948, p.432. ½ col.

"Like other books on the scientific feeding of farm animals, this volume conforms to the usual pattern, a preliminary explanation of the theoretical bases of scientific rationing being followed by a general description of feeding stuffs in common use, while in the latter chapters the principles of the rationing and management of the various classes of farm livestock are clearly and simply expounded. Following the experimental results of American investigators, the author has based the maintenance requirements for energy on the three-fourths power of the live-weight of the animal instead of on the usual surface law, and has also applied the same principle to the protein requirement estimations . . . Attractively produced, the print is very readable, and the twenty-five photographic illustrations help materially to sustain the reader's interest." *E. T. Halnan.*

Ernstene, A. Carlton. Coronary heart disease. 102p. 1948. C. C. Thomas, Springfield, Ill., $2.50.

Geriatrics, Sept.-Oct. 1948, p.321. ⅜ col.

"An excellent summary of the subject of coronary heart disease. The author describes the principal clinical manifestations of the disease such as angina pectoris, acute myocardial infarction, acute coronary failure, paroxymal dyspnea, auriculoventricular and intraventricular block, other disturbances of cardiac rhythm and congestive heart failure. Recent advances in methods of diagnosis and treatment are discussed and the subject is brought up to date in all ways . . . Written in a clear and concise style and should prove a valuable addition to the library of everyone interested in the subject of coronary heart disease." *T. Z.*

Fox, Reginald. Ferrous materials for the engineer. 159p. 1948. C. Griffin, London, 12s. 6d. net. (Industrial text-book series, no.14.)

Mechanical world, Sept. 24, 1948, p.365. 1¼ col.

"The professional metallurgist would assuredly classify the volume . . . as a very elementary text, mainly concerned with the general properties and testing of iron and steel. Since the title addresses the book specifically to engineers, the superficial style in which it is written may be perhaps justified, although the reviewer doubts this. Even so, as the author himself admits in his preface, it is no more than an introduction to a complicated subject. To the reviewer it seems a pity that the author has thus underestimated his potential readers' capacity . . . Some of the more important topics such as heat treatment, fatigue testing and the constitution of alloy steels, might have had a fuller and more useful treatment at the expense of more commonplace matter . . . On the whole, the book is something of a disappointment. Had the author taken more trouble to verify his facts, he could have produced a very useful primer on an important subject which might have served to whet the appetite of the younger engineer for more elaborate and detailed treatises." *J. W.*

Metal industry, Oct. 15, 1948, p.309. ⅛ col.

"Although . . . intended primarily for the engineer, much of the information contained in the earlier chapters should already be familiar to him. The first two chapters . . . are concerned with the general properties of materials and the testing of materials. Among the sub-

jects the author describes are types of fracture, microscopic examination and the various testing methods. The remaining two chapters are devoted to the heat-treatment of steel and the materials available."

Gaydon, Alfred G. Spectroscopy and combustion theory. Ed.2. 242p. 1948. Chapman & H., London, 25s. net.

Gas world, Aug. 28, 1948, p.296. ¾ col.

"It is the author's purpose to collect together and discuss the results of recent research in the several ways in which spectroscopy has been applied to combustion problems . . . Dr. Gaydon has presented his subject in such a way that this monograph may be of service to those engaged in research in the field, but also that it may be read easily by the beginner and the non-specialist. A comprehensive bibliography is included and an Appendix giving details useful for the recognition of spectra frequently encountered in combustion work."

Giblin, J. C. Qualitative and volumetric analysis. 175p. 1948. Longmans, New York, 6s.

Chemistry & industry, Sept. 25, 1948, p.621. ½ col.

"Quite a short and small volume which aims at providing a complete course in qualitative and volumetric analysis up to the standard of university scholarships. Having such an object, it is clear that it does not come into the range of books particularly useful to the industrial chemist or analyst . . . Covers the usual well-worn paths, first of qualitative analysis . . . and then of elementary volumetric analysis . . . The treatment is lucid and explanatory in a manner well adapted to the needs of the junior student, and the reactions are carefully tabulated and explained, so that the student who has worked carefully through this book . . . will have been thoroughly grounded in the rudiments of the subject . . . Can be recommended for junior students, but not for industrial chemists." *H. E. Cox.*

Gloag, John, ed. Place of glass in building. Ed.3, revised and enlarged. 122p. Allen & Unwin, London, 10s. 6d.

Glass industry, Sept. 1948, p.520. ½ col.

"Planned primarily for students of architecture and building . . . Provides a practical illustrated guide to the chief types of glass manufactured in Great Britain and includes descriptions of their properties and appropriate uses. The various phases of the book have been contributed by specialists in each particular field. The book, naturally, primarily concerns the use of plate glass and its structural applications. The manufacture of polished plate glass is discussed, as well as flat drawn sheet glass; rolled, cathedral and wired glasses; colored glasses; glass block; and Armourplate glass."

Goodstein, R. L. Text-book of mathematical analysis; the uniform calculus and its applications. 476p. 1948. Oxford Univ. Press, London, 30s. net.

Nature, Sept. 4, 1948, p.353. 1 col.

"The first eleven chapters contain all the calculus that is needed for the ordinary and advanced papers of the higher school certificate examinations. The whole book covers the calculus syllabus for the general honours degree of London and provincial universities and the London special degree. The demonstrations are lucid and often original, and the student should profit by the examples of technique so well illustrated in every chapter . . . The book is certainly a contribution of outstanding merit to the very few serious efforts which have been made to present limiting processes to the student at a level which he can readily understand, and which at the same time will leave him nothing to unlearn at a more advanced stage . . . Contains more than four hundred worked examples." *L. M. Milne-Thomson.*

Grodzinski, P., ed. Diamond tool patents. v.2: Diamond abrasive wheels. 52p. 1948. Industrial Diamond Information Bureau, Industrial Distributors (Sales), Ltd., 32-34 Holborn Viaduct, London, E. C.1, 10s. net.

Metal industry, Sept. 17, 1948, p.232. ½ col.

"Lists and classifies in numerical order about 400 British, American, German, etc., patents dealing with this subject matter . . . The main part of the brochure contains abstracts of these patents, again in numerical order, in which it is referred to the main features of these patents. The length of the abstracts varies between 50 to 100 words. Data on particular compositions are usually quoted in full. An appendix is added on patents dealing with the production and use of loose diamond abrasives. The abstracting and classification of these patents will be continued in the monthly Bibliography of Industrial Diamond Applications issued by the same organization."

Gruber, Charles M. Handbook of treatment and medical formulary. 585p. 1948. Davis, Philadelphia, $7.

Pennsylvania medical journal, Sept. 1948, p.1469. ⅝ col.

"Written in order to offer students and practicing physicians easy access to information on therapeutic measures. The text is alphabetically arranged and the various synonyms noted are cross-referenced to those pages containing the appropriate discussions. For each disease entity the author has included a brief review of its etiology, symptoms, and physical findings, in addition to recommended treatment. Most of the drugs discussed are presented in prescription form, employing both English and Latin for the sake of completeness . . . Recommended for its conciseness and the ease with which information may be obtained therefrom."

Ham, C. W., & Crane, E. J. Mechanics of machinery. Ed.3, revised. 538p. 1948. McGraw, New York, $5.

American machinist, Oct. 7, 1948, p.186. ½ col.

"The third edition of this standard text on kinematics includes additional chapters on vibrations and critical speeds in shafts—lateral and torsional vibrations, and the gyroscope. An appendix presents approximate methods for constructing involute and cycloidal gear profiles. Other internal changes have been made in the sections on cams, gears, flywheels and governors, and on balancing aircraft engines . . . Well illustrated with link drawings, force diagrams and machinery sketches. In general, mathematical solutions of machinery problems

are supplemented where possible with graphic solutions."

Military engineer, Oct. 1948, p.490. ⅔ col.

"A study of the masses, motions, and forces in machines . . . divided into two parts: Mechanism and Kinematics and Dynamics of Machinery. Emphasis throughout is on graphical constructions to reduce as far as possible the amount of numerical computations."

Hamilton, Donald R., and others. Klystrons and microwave triodes. 533p. 1948. McGraw, New York, $7.50. (M.I.T. radiation laboratory series, v.7.)

Wireless engineer, Sept. 1948, p.301. ¾ col.

"Divided into three parts, this volume aims at a comprehensive treatment of the nominated u.h.f. valves. The first part is concerned with fundamental theory, the second with planar space-charge tubes, and the third (and by far the longest part) with klystrons. The attack varies from one author to another, but is always logical rather than didactic. Thus the reader is compelled to read to the last sentence of each part to be sure of understanding any particular feature. The three authors have achieved an astonishing uniformity of terminology and outlook, fostered, no doubt, by their common activities in the Radiation Laboratory during the war." *J. T.*

Harpster, Hilda T. The insect world. 211p. 1947. Viking, New York, $3.

Quarterly review of biology, Sept. 1948, p.251. ⅛ col.

"The author presents a surprisingly informal survey of interesting insects, drawing upon her particular familiarity within this group. The various kinds are introduced in a very natural way in informative discussions of how insects grow, what they eat, how aquatic kinds breathe, or of such special features as protection, camouflage, and homes . . . The style throughout should appeal to readers at the high school level, and make information pleasantly available to parents who are puzzled by the caterpillars and bugs their children bring home and ask about." *Lorus J. Milne & Margery J. Milne.*

Harvey, William Clunie, & Hill, Harry. Milk products. Ed.2. 343p. 1948. H. K. Lewis, London, 30s.

American journal of public health, Sept. 1948, p.1286. 1 col.

"The authors have discussed . . . many of the sanitary and manufacturing problems connected with seven dairy products, viz., ice cream, cream, butter (and margarine), cheese, condensed milk, evaporated milk, and dried milk. In the eighth and last chapter, 20 pages are devoted to special milk drinks, including fermented milk, junket, whey and lactalbumin foods, malted milk, and chocolate milk . . . Although elemental in some respects, the book can be recommended for student reference use and for guidance of commercial interests who desire general information. Like most information of this type when assembled in book form, it becomes historical." *A. H. Robertson.*

Hatt, Robert T., and others. Island life; a study of the land vertebrates of the islands of eastern Lake Michigan. 179p. 1948. Cranbrook Inst. of Science, Bloomfield Hills, Mich., $4. (Bulletin no. 27.)

Auk, Oct. 1948, p.618. ⅞ p.

"The various islands are described as to their topographic and ecological features and something of their past history and altered conditions when important. The report then takes up the herpetology, ornithology, and mammalogy in turn, and closses with a general discussion of the conclusions that have been developed from the study. An appendix gives a list of the land vertebrates arranged by islands . . . There is a great deal of interesting information brought out by this study." *J. T. Zimmer.*

Carnegie magazine, Oct. 1948, p.95. 3¼ col.

"The book, which is beautifully designed and printed, is excellently illustrated with superb photographs, the majority taken by the editor, Robert T. Hatt. The appendix provides a complete listing of the land vertebrates known to inhabit each island. There is an excellent bibliography and a useful index. Once again Cranbrook Institute is to be congratulated upon having fulfilled its research function in a notable manner. It is to be further commended upon having achieved the second goal of a museum—presentation of scientific results in a manner and format pleasing to layman and specialist alike." *M. Graham Netting.*

Nature magazine, Oct. 1948, p.441. ⅛ col.

"A study in animal geography, dealing as it does with the mammals, birds, reptiles and amphibians found on the Lake Michigan islands that lie off the northwest shores of the Lower Peninsula . . . Treats, also, of the geological and cultural history of the region and the habits of the animals of the islands . . . While of interest generally to naturalists, it is also essential to anyone who may plan to visit the island region covered."

Hoag, J. Barton, & Korff, S. A. Electron and nuclear physics. Ed.3, revised. 522p. 1948. Van Nostrand, New York, $5.

American journal of physics, Sept. 1948, p.367. ⅞ col.

"Except for a major change in the chapter on artificial transmutation, and fairly frequent minor extensions, there has been no significant change from the earlier edition in either the content or the method of presentation. This edition . . . will be found valuable mainly in two respects. First, through many suggested experiments it allows a student to perform, or visualize performing, many not too complicated laboratory exercises which aid immeasurably in furthering his understanding of concepts and basic experimental procedures . . . The book will likewise be found valuable to many who desire a rapid but not too thorough survey of the many fields covered . . . The reviewer does not consider it effective for the teaching of an understanding of subject matter . . . It is not designed to aid effectively in the training of a student to think for himself in a scholarly fashion." *J. D. Stranathan.*

Ingersoll, Leonard R., and others. Heat conduction with engineering and geological applications. 278p. 1948. McGraw, New York, $4.

Chemical engineering, Oct. 1948, p.315-316, 318. 2 col.

"The combined efforts of three scientists have resulted in a technical study of the phenomena of heat conduction, which is, to say the least,

a highly provocative and stimulating study of this most interesting natural process . . . An excellent piece of work and has been carefully prepared and edited . . . The authors . . . are to be commended for their painstaking study in the presentation of this subject. The book is decidedly a worthwhile contribution to the search of knowledge and more complete data on a subject that for many years could be treated only in a haphazard hit-or-miss fashion." *William J. Shore.*

Chemical engineering progress, Sept. 1948, p.40. ⅝ col.

"Expanded to include many applications published by many workers. The emphasis is upon unsteady-state heat conduction, involving the use of Fourier Series and Bessel Functions. Reference is made to the published work of chemical engineers including Sherwood, Gilliland, Lewis, McAdams and the present reviewer. The book is understandable by anyone with a knowledge of ordinary calculus . . . Commended to engineers who wish to spend the little time usually devoted to solving crossword puzzles to reviewing and applying their calculus. One of the rewards will be interest instead of fright when they see such things as Bessel Functions in the current engineering literature." *A. B. Newman.*

Mechanical engineering, Oct. 1948, p.843. 1 col.

"Engineers, physicists, and geologists should welcome this book which has been written by authorities in the field of heat conduction . . . The authors developed the subject of heat conduction with special reference to the needs of superior students of engineering, physics, and geology who have completed a formal course in differential and integral calculus . . . A large number of excellent problems, with answers, are given so that the reader can have an opportunity to apply the theory. Teachers, students, and engineers will find this book an excellent reference in the field of heat transfer." *E. B. Penrod.*

Jacobson, Carl A., comp. & ed. Encyclopedia of chemical reactions. 5v. v.2: Cadmium, calcium, carbon, cerium, cesium, chlorine, chromium. 917p. 1948. Reinhold, New York, $12.

Chemical and engineering news, Oct. 4, 1948, p.2986. ⅝ col.

"Perusal of the new volume leaves the reviewer with the feeling that the work is a valuable addition to the reference literature of chemistry but falls considerably short of its potentialities. Some of its deficiencies are those so apt to creep into a compendium of this sort: typographical errors and inconsistencies in formulation and nomenclature. Others derive mainly from the difficulty of laying down a simple, logical, and consistent editorial policy . . . In spite of its various defects, the work should be of considerable value to the chemical profession." *Aaron J. Ihde.*

Journal of physical & colloid chemistry, Oct. 1948, p.1274. ½ p.

"Will be welcomed because of its wealth of information . . . The appearance and print of the book are excellent. An extensive index to reagents—formulas and an 'index to substances obtained—formulas' greatly improve the usefulness of the book. An errata sheet to Volume I is added to Volume II." *I. M. Kolthoff.*

Journal of the Franklin Institute, Aug. 1948, p.178. 10 l.

"Includes some 3331 reactions for the elements cadmium, calcium, carbon, cerium, cesium, chlorine and chromium . . . Has the same general arrangement as the previous volume, first as to the formulas of the reactants and next as to those of the reagents. The list of 'Journals used by abstractors' has been revised and some changes made in the abbreviations employed . . . The amount of volunteer labor that has gone into the production of this set merits the thanks of chemists everywhere who will profit by the accessibility of the compiled data." *G. E. Pettengill.*

Paper trade journal, July 8, 1948, p.56. 12 l.

"Alphabetically arranged, first as to formulas of the reactants and next as to reagents and contains explanatory paragraphs describing the conditions governing each reaction and the nature of the products formed. For those engaged in analytical or chemical research it is a great contribution to the saving of time and reference work."

Jánossy, L. Cosmic rays and nuclear physics. 186p. 1948. Pilot Press, London, 9s. 6d. (Frontiers of science series.)

Discovery, Sept. 1948, p.300. ¼ col.

"Gives a comprehensive but concise account of cosmic rays, and so far as present-day delays in publication permit, it is up to date. In many respects the book is excellent, and the chapters dealing with mesons are particularly welcome. At last we have in simple and concrete terms an explanation of how the meson is believed to hold the nucleons in an atomic nucleus together. The relationship of the meson field of the nucleus, the meson of cosmic rays, and the emission of beta particles by radioactive substances is made as clear as . . . our present knowledge permits . . . Most suitable for a student who has, say, just embarked on a course for a pass degree in physics or any reader who has an equivalent knowledge of physics and mathematics."

Nature, Oct. 2, 1948, p.513. ½ col.

"Could be read with profit by a man who has taken a science degree with physics as at least a subsidiary part, or by a brilliant schoolboy, and can be recommended to people like these. But it is not a popular book in anything like the usually accepted sense; it is a beginner's research manual, characterized by the researcher's inclusion of much detail, many references, and minor qualifications of general statements . . . Can be warmly recommended to people of the right sort; but one cannot agree that it achieves the avowed aim of the Series is that it 'requires no previous specialized knowledge'." *T. G. Cowling.*

Jennings, W. A., & Russ, S. Radon; its technique and use. 222p. J. Murray, London, 18s. net.

Journal of scientific instruments and of physics in industry, Oct. 1948, p.364. 8 l.

"Written as a book of reference; the technique is treated in detail . . . Divided into the following three parts: Radio-activity: radon, its general properties, measurement and uses in medicine, industry and research; The rationale of radon technique; Radon in medicine. An appendix gives an extract from the 'Recommendations of the British X-ray and Radium Protection Committee', and another appendix concerns the design of a national radon centre."

Philosophical magazine, Aug. 1948, p.662. ⅝ p.

"The radioactive gas radon, the 'emanation' of radium, is widely used in medical work as a source of radiation, which, in a suitable container, can be inserted into the body of a patient and left there . . . The authors, both of whom have experience as hospital physicists, describe for the benefit of their fellow-workers the techniques required in handling and measuring this gas, from the separation from its parent radium to its sealing up in 'seeds.' They keep rigidly to their subject, and do not discuss other elements like cobalt, carbon or iodine whose radioactive isotopes seem likely to become extensively used in medicine . . . Contains a number of tables and graphs which must be of very great value to practitioners who have to deal regularly with radon, and to them it will be well worth its quite moderate price." *J. H. A.*

Jones, Park J. Petroleum production. v.4: Condensate production and cycling. 238p. 1948. Reinhold, New York, $5.

Chemical and engineering news, Sept. 27, 1948, p.2918. ⅝ col.

"Mr. Jones has performed a distinct service to those who require an introduction to engineering as applied to condensate gas reservoirs. Further study by electric models should enable the engineer to obtain a reliable estimate of the patterns resulting from sweep of the rich gas by injected dry gas." *H. H. Power.*

Petroleum processing, Sept. 1948, p.906. ¼ col.

"Condensate production and cycling . . . is a topic of considerable interest today. Such products of the residue gas from condensate production as liquefied petroleum gases and natural gasoline are not considered. The technical information presented is of primary interest to those oil men in the producing rather than those in the manufacturing phase of business . . . Deals with condensation in reservoirs, injection, production by expansion, various types of reservoirs, and maximum efficiency rate."

Rubber age, Sept. 1948, p.778. 7 l.

"Latest methods and procedures are reviewed and discussed, with suggestions for possible improvement . . . Divided into two parts, the first on foundations and the second to applications. A subject index is provided."

Keith, Arthur. New theory of human evolution. 451p. 1948. Watts, London, 21s. net.

Nature, Sept. 4, 1948, p.352. 1⅓ col.

"This book is the fruit of a long life of scientific work and meditation by a distinguished thinker with strong intuitions, trying to look towards a synthesis as yet seen 'through a glass darkly', and trying to make that vision clearer without limiting possibilities of its future adjustment. There is no attempt to force the facts to fit preconceived dogma, no riding of a pet theory to exhaustion . . . The book is one for careful meditation, and is an interesting monument of a respected and beloved personality." *H. J. Fleure.*

Kennedy, Clifford W. Quality control methods. 243p. 1948. Prentice-Hall, New York, $4.75.

Industrial quality control, Sept. 1948, p.29. 3¾ col.

"[The author] has demonstrated in his book an ability to pick out the important points. He discusses them in down-to-earth style. His illustrations and examples always make the point. Where arithmetic is necessary, he goes through it in meticulous detail so that anyone can follow it. He sets forth a wealth of experience as a practical quality control worker. In some important spots, however, Mr. Kennedy's book falls short of technical perfection. Many instructors will wish to use the book as an introductory text because of the ease with which operating personnel can understand its style. Unfortunately they may find this impossible because of these technical deficiencies. It is hoped a second edition will soon be prepared overcoming this weakness . . . Written for practical shop men by a practical man. The points of arithmetic and theory which give the shop man trouble are outlined with every detail clearly stated. Occasionally the book gets beyond its depth technically." *Franklin E. Satterthwaite.*

Tool & die journal, Oct. 1948, p.151. ¼ col.

"A compilation of the author's own experience and efforts in learning the technique known as 'Statistical Methods in Quality Control' . . . Will give the reader an easily understood, well-balanced knowledge of the subject from both the theoretical and practical viewpoints and prepare him for the more technical and involved practices of modern Quality Control."

Kennon, William Lee. Astronomy; a textbook for colleges. 737p. 1948. Ginn, Boston, $5.50.

Popular astronomy, Oct. 1948, p.454. ⅓ p.

"The discussion is divided into four parts with a total of 31 chapters . . . The reader is impressed with the large number of well printed diagrams and photographs, ranging in time from Tycho Brahe's 'Uraniburg' to the quite modern Adler Planetarium in Chicago . . . Considering its size, its comprehensiveness, and its recency, this volume is to be recommended not only as a college text but also as a reference work and, as such, worthy of a place upon the shelves of all libraries which furnish cultural as well as scientific material for their patrons." *C. H. G.*

Science, Oct. 1, 1948, p.365. ⅝ col.

"The book is characterized mainly by the simple and explicit style in which it is written. It is also extensively illustrated with pictures, astronomical photographs, and drawings. The author emphasizes that he has tried to 'preserve the sequence of observation, application, and interpretation.' This produces a somewhat disjointed result, because the same subject matter is treated in more than one place. But the author has spared no effort to maintain the student's interest. The book is marred by a number of minor errors and defects which should not have been permitted to occur." *Paul Herget.*

Lang, Daniel. Early tales of the atomic age. 223p. c1948. Doubleday, New York, $2.75.

Frontiers, Oct. 1948, p.23. ⅓ col.

"Readers who wish to refresh their memories or complete their knowledge of the atomic bomb project will find this book useful . . . While it does not deal with the scientific details

of atom research, it gives the human background of Oak Ridge, the Manhattan District, the security measures and includes a review of the present project on Long Island for the training of candidates for future atomic investigation . . . Its chief value to the layman probably is in gathering up all the odds and ends of atomic bomb production by piecing together in one story a great deal that interested citizens may have missed along the line. Scientists who have never been employed on federal research and who are interested in knowing something of the conditions of living and working, especially on secret projects, will learn a great deal from this book."

Science illustrated, Oct. 1948, p.60. ⅝ col.

"Carl Van Doren says in his introduction, 'Whatever Mr. Lang tells is something that has happened to some person at some place and at some time.' This is good, straight, humanized reporting. And it makes about the most readable, understandable introduction to atomic energy you can find."

Linick, Leslie L. Jewelers' workshop practices. 516p. 1948. Paulson, Chicago, $6.

American horologist and jeweler, Sept. 1948, p.91. ⅜ col.

"The purpose of compiling the information given in this volume in as complete and yet concise form, expected from most of those likely to be interested, is to improve methods of manufacture, modernize old and worn-out techniques, eliminate guesswork, show errors, correct information, suggest newer or better materials and to simplify uselessly complicated procedures. Plain language is used as much as possible to reduce the chances of error. Covering an extraordinarily wide range of subjects, this book is written for the jeweler, the man who directs or does the work, and not for the scientist, chemist, metallurgist, or analyst with advanced training."

Jewelers' circular-keystone, Sept. 1948, p.247. ½ col.

"Can be recommended for supplying an item that has been for a long time wanting, on the book shelf of the jewelry shop—a reliable up-to-date collection of descriptions of processes, equipment for them, formulas, addresses of sources of supplies, definitions, data-tables of gem materials, and other knowledge in categories useful to all who work in repairing or making jewelry . . . It is authoritative and, at the same time, written in language understandable by practical workmen . . . A valuable and most timely book for the repairing or manufacturing jeweler who works in the kind of shop usually connected with jewelry stores, small or large."

Mackie, T. J., & McCartney, J. E. Handbook of practical bacteriology. Ed.8, revised. 624p. 1948. Livingstone, Edinburgh, 25s.

Manufacturing chemist and manufacturing perfumer, Sept. 1948, p.407. ⅔ col.

"Primarily a reference book for the pathology laboratory, but it contains much valuable information for the general or industrial bacteriologist . . . An introductory section on the morphology and physiology of bacteria and the principles of immunology is followed by seven chapters on bacteriological technique, which contains a vast amount of potted wisdom . . . In Chapter VIII is included an account of the preparation of vaccines, and Chapter IX gives a good summary of the standard methods for the bacteriological examination of water, milk, ice cream, antiseptics, etc. Part 3, comprising half the book, deals with the pathogenic bacteria and related organisms, with a chapter on viruses. To the general reader perhaps the most interested section is the account of the Gram-negative intestinal bacteria . . . This section . . . affords a valuable and authoritative source of reference for all matters relating to the cultivation and identification of the pathogenic bacteria." *L. D. Galloway.*

McKinstry, Hugh E., and others. Mining geology. 680p. 1948. Prentice-Hall, New York, $10.

Engineering and mining journal, Oct. 1948, p.117. ½ col.

"In the 'Foreword' . . . the author outlines his purpose—to survey 'that incompletely charted borderline that lies between respective domains of geology and mining.' More simply stated, a mining man might expect to learn 'How to Use Geology to Find Ore' . . . The author has drawn heavily on his own wide experience and that of other successful geologists to prepare a book that is destined to be well thumbed in the personal libraries of many geologists and mining engineers."

McLachlan, Norman W. Modern operational calculus; with applications in technical mathematics. 218p. 1948. Macmillan, New York, $5.

Power & works engineering, Sept. 1948, p.260. 11 l.

"Intended as an introduction to modern operational calculus based upon the Laplace transform . . . Written for the use of post-graduate engineers and technologists, but it may also be found useful by advanced pure mathematics students . . . Those unacquainted with the complexities of differential equations and advanced integration will not get very far with this subject."

Maedel, George F. Basic mathematics for radio. 334p. 1948. Prentice-Hall, New York, $4.75.

Proceedings of the I.R.E., Oct. 1948, p.1269. ⅔ col.

"Deals with fundamental mathematical principles. The connection with radio is, however, not close and is somewhat artificial. Applications to mechanics, physics, surveying, or navigation might with equal justice be urged and illustrated. As a textbook giving a grounding in basic definitions and principles, and for giving the reader some facility in the use of mathematics to solve problems in the above-mentioned fields, the usefulness of the book is apparent. The author has spared no pains to produce a text of crystal clearness . . . Adapted to the capacity of students of high-school grade and for the independent student. The only prerequisite is a knowledge of arithmetic." *Frederic W. Grover.*

Radio & television news, Oct. 1948, p.118. ⅝ col.

"Truly a fundamental treatise on mathematics as encountered in radio work both by the serviceman and student. The author has presupposed very little mathematical knowledge on the part of the reader and hence the dis-

cussion begins with a section devoted to arithmetic . . . The author has used radio and electrical problems throughout the text both as illustrative material and in the problems to be solved at the end of each chapter."

Radio-electronics, Oct. 1948, p.97. ½ col.

"Begins with basic arithmetic and ends with complex numbers . . . Exercise problems and step-by-step explanations of their solutions are spotted plentifully throughout the pages. The reader is carried through the work in logically planned stages so that any intelligent person can use the text for unaided home study. The language is clear and no assumptions are made by the author about previous knowledge on the reader's part." *R. H. D.*

Marsh, J. T. Textile science; an introductory manual. 388p. 1948. Chapman & H., London, 32s.

Journal of the Society of Dyers and Colourists, Aug. 1948, p.284. ⅝ col.

"Mr. Marsh's latest book is likely to appeal to an even wider audience than his previous ones. To some extent it is a concise version of his books on cellulose chemistry, mercerising, bleaching, and finishing, but it includes also new matter relating to spinning, weaving, and knitting, as well as chapters on dyeing and printing. There is always a danger when preparing a summary that, owing to the desire to retain as many important facts as possible, the result will be so concentrated that reading becomes difficult. On the whole the author has managed to avoid this difficulty . . . Contains no references in view of its introductory nature, but up-to-date bibliographies are included. There are numerous, highly informative illustrations, and the printing and general layout are of the expected high quality, although marred by indifferent proofreading. There can be little doubt that this book will be the standard introductory text-book for students of textile chemistry for many years to come." *C. L. Bird.*

Martin, C. R. A. Practical food inspection. Ed.3. 2v. 1948. H. K. Lewis, London, 18s. net each.

v.1. Meat inspection. 316p.

v.2. Fish, poultry, and other foods. 284p.

American journal of public health, Sept. 1948, p.1287. 2 col.

"Written presumably for use in the British Isles only for the 'lay food inspectors,' these two volumes are unique in several ways. Quite an amount of the information in Volume I . . . agrees with the information published as regulations governing meat inspection of the U.S.D.A., January, 1947, issue. (U. S. Government Printing Office); there is a surprising amount of information in Volume II . . . that would be valuable to state, city or county regulatory food officials or sanitarians of the U. S.; there is no bibliography in either volume; and there is no mention made of any authoritative source from the Continent or the United States . . . Considering that there are relatively few books on the subject of practical food inspection, these volumes may be of value to the health officer and his sanitarians." *Ferdinand A. Korff.*

Journal of the Royal Sanitary Institute, Sept. 1948, p.571. (Review of v.1 only.) ⅝ p.

"There is already going on a considerable advance in the number of candidates for inspection positions, and for them and others this book will be found very useful indeed . . . Follows the lines of the previous two volumes covering all the aspects of the subject required by the meat inspector, 'omitting much ultra-scientific detail, which may be regarded as superfluous to the workaday needs of inspectors'!"

Journal of the Royal Sanitary Institute, Sept. 1948, p.572. (Review of v.2 only.) ⅛ p.

"The author has included the more important developments and new legislation which have taken place resulting from the stimulus of war . . . The various sections . . . fall under the headings of fish, poultry and game; fruit, vegetables and cereals; canned foods; milk and milk products; miscellaneous foods; food poisoning; legal procedure; glossary of terms, and an index. Of these, the first two receive the greatest attention . . . The other sections will be found to contain a great deal of information useful to the food inspector. The glossary of terms and the index are both well done."

Mason, H. L. See Oldenbourg, R. C., & Sartorius, H.

Maynard, Harold B., and others. Methods-time measurement. 292p. 1948. McGraw, New York, $3.75.

American machinist, Oct. 7, 1948, p.185. ½ col.

"A must for all methods men . . . An excellent presentation of a procedure for treating method and time simultaneously. Filling a long-felt need, this procedure supplements existing practices and assists in the solution of many problems such as, developing effective methods in advance of production, improving existing methods, estimating, and developing effective tool designs . . . Comprehensive in its scope the book contains a total of 29 chapters and explains not only the methods-time procedure as such but also the general procedure of methods development and the application of the procedure to a variety of shop problems actually encountered."

Mettler, Fred A. Neuroanatomy. Ed.2. 536p. 1948. Mosby, St. Louis, $10.

Merck report, Oct. 1948, p.32. ⅝ col.

"While written to meet the needs of the medical student beginning instruction in neuroanatomy, [it] also is an excellent reference text for the neurologist, surgeon, and general practitioner. The material contained therein is not readily available in English and therefore should serve to aid students in the subsequent comprehension of the hematogenous infections and pathology of the neural system . . . The author recognizes that, while the presentation has been intentionally left loose enough to allow for special organization which the individual teacher may prefer to give his course, the material here presented can be considered only as a bare outline for the fuller study required by special fields of Medicine."

Minikin, R. R. Piling for foundations. 196p. 1948. Lockwood, London, 15s. net.

Mechanical world, Sept. 17, 1948, p.323. 1 col.

"The publishers are to be congratulated for assembling in this volume the author's various articles on the subject of Piling which have

been appearing in British and U.S. Journals. The book succeeds in combining the results of practical experience with purely theoretical considerations and will be a useful manual to those engaged in office and field alike . . . There can be few branches of engineering where opinions vary and experiences differ as much as they do in the subject of piling work. Thus, any manual can only endeavour to deal with the various aspects on broad lines, and though there may be as many exceptions as there are rules the wide accumulation of methods and formulæ should make this work a valuable addition to the civil engineer's bookshelf." *A. I. N.*

Mrak, E. M. See Advances in food research.

Muller, Gulli Lindh, & Dawes, D. E. Introduction to medical science. Ed.2, revised. 580p. 1948. Saunders, Philadelphia, $4.

American journal of nursing, Oct. 1948, p.40, 42. 1 col.

"Divided into six units, in a very logical, understandable manner: The Development of Medical Sciences, The Causes of Disease, How Disease Manifests Itself in the Body, How the Doctor Makes the Diagnosis, How Disease is Treated, How Disease is Controlled and Prevented . . . The illustrations are pertinent to the topics discussed and graphs have been brought up to date and several new ones added. There are brief review questions at the end of each chapter, and the bibliography has been enlarged. A glossary at the end of the book should prove helpful to students . . . Should be valuable as a student text." *Sally Heitman.*

Nassau, Jason John. Practical astronomy. Ed.2. 311p. 1948. McGraw, New York, $5. (McGraw-Hill astronomical series.)

Military engineer, Oct. 1948, p.490. ⅓ col.

"The first part . . . presents the fundamental principles and ordinary determinations of time, latitude, and zenith as made with an engineer's transit, sextant, and nautical almanac. Clocks and chronometers are covered as are sidereal and civil time. The appendix includes an adequate introduction to spherical trigonometry. Precise determinations of a zenith, time, longitude, and latitude make up the second part of the book. Secular and periodic changes, the 'American Ephemeris and Nautical Almanac,' and Star Catalogues are explained. The use of the transit instrument, zenith telescope, and the theodolite are treated in detail. The advantages of the modern astrolobe are clearly presented. A number of handy formulas and excerpts from the nautical almanac are included in the appendix. Fourteen forms for observations and computations are also included, as are the answers to the numerous exercises."

Nock, O. S. Railways of Britain. 120p. Batsford, London, 15s. net.

Model engineer, Sept. 30, 1948, p.363. ⅝ col.

"Written in an easy-flowing, entertaining style, Mr. Nock's account is not ponderously progressive; yet it is well-knit and coherent; most of it is fresh and new, in spite of the fact that, to the expert, the subject-matter is mostly familiar. But Mr. Nock writes chiefly of his own personal observations and researches, and he has put together a narrative of which the value is already high, and must be enhanced by the passage of time. The illustrations, many of them unfamiliar, have been gathered from a number of different sources; they are beautifully reproduced and greatly add to the value and interest of the book . . . We cordially commend the book to the notice, not only of railway enthusiasts, but of a much wider circle of readers."

Norris, John W. Warm air heating and winter air conditioning. 320p. Lennox Furnace Co., Marshalltown, Iowa, $5.

Gas, Sept. 1948, p.103. 12 l.

"Technical material is presented in the layman's language, and the principles of design of various types of heating systems are described graphically . . . Includes material on new techniques in warm air heating—constant air circulation, electrostatic air cleaning and gravity heating of basementless houses . . . Originally intended for the use of the Lennox sales and dealer organization but has now been released for general distribution."

Heating and ventilating, Sept. 1948, p.112. ⅛ col.

"Prepared in a readable style . . . [and] intended to serve as a guide to the student and to the man in the field . . . Covers not only the engineering fundamentals but also installation and servicing of all types of warm air heating equipment. The author has tried to cover every phase of warm air heating and winter air conditioning to acquaint the student with the various problems of this heating field. Mr. Norris has had the cooperation of The Lennox Furnace Co. engineering staff in the preparation of charts, tables and other material."

Sheet metal worker, Sept. 1948, p.65. ½ col.

"Supplies information that will be most helpful to those who design and install warm air heating equipment . . . As might well be surmised this book constitutes a text on the subject, dealing as it does with measuring heat losses from buildings, selecting the equipment, and the design and installation of various types of warm air heating systems."

Northrop, John H., and other. Crystalline enzymes. Ed.2, revised and enlarged. 352p. 1948. Columbia Univ. Press, New York, $7.50.

Chemical and engineering news, Sept. 13, 1948, p.2717. ⅝ col.

"The simplicity of presentation makes this volume really enchanting reading, even for the nonenzymologist; the general information on the handling of proteins and on kinetics is very valuable to the chemist concerned with the behavior and purification of any enzyme. The appendix with its very detailed experimental directions makes the book an indispensable working tool for the chemist concerned with the specific subject matter covered therein." *Bernard Axelrod.*

Chemical engineering, Oct. 1948, p.318, 320. ¼ col.

"Treats of the chemistry and isolation of proteolytic enzymes and bacteriophage. New material covered in this edition includes a discussion of the methods of preparation and properties of the enzymes ribonuclease and

hexokinase. An appendix of over sixty pages contains methods of preparation and crystallization of enzymes. The subject matter . . . is based on work carried out in the Laboratory of General Physiology of the Rockefeller Institute for Medical Research at Princeton, N. J."

Chemist, Aug. 1948, p.389. 2 col.

"Includes crystalline ribonuclease, crystalline hexokinase; protein synthesis and virus formation; the reaction of enzymes and proteins with mustard gas; and the isolation of crystalline diphtheria antitoxin . . . The problem of crystalline enzymes is not a simple one. The contributions of the Princeton workers, however, are of immense importance to the protein and enzyme chemist. This monograph has my highest recommendations." *Henry Tauber.*

Oldenbourg, R. C., & Sartorius, H. Dynamics of automatic controls; edited and translated by H. L. Mason. 275p. 1948. American Soc. of Mechanical Engineers, New York, $7.50.

Mechanical engineering, Oct. 1948, p.843. 1 col.

"The translated text is reproduced from typewritten pages, yet is quite legible. Wherever possible, direct facsimiles of the original figures and mathematics are incorporated with a minimum of alteration to bring wording and symbols acceptably into line. There have been added 19 references which were not included in the bibliography of the original edition . . . Aside from the remarkably concise and orderly presentation, and the high mathematical caliber of this book, it is most noteworthy for its attention to nonlinear phenomena and for its application of an unusual criterion for effectiveness of control . . . As to the translation, Professor Mason's knowledge and experience in automatic controls have contributed heavily to its success. His choice of words shows unusual appreciation and articulateness, although some engineers may find a few of his terms a bit special. Thanks are due to all responsible for a fine job." *George A. Philbrick.*

Osborne, John. Acrylic resins in dentistry. Ed.3, revised. 163p. Blackwell, Oxford, England, 15s.

British plastics, Sept. 1948, p.444. ½ col.

"Further advances have necessitated a revision of the text beyond that carried out in the second edition, with the result that this book is probably the most comprehensive and concise study of the subject yet available to students and practitioners."

Phillips, Charles J. Glass, the miracle maker. Ed.2, revised and enlarged. 429p. 1948. Pitman, New York, $6.

Glass industry, Sept. 1948, p.520. ⅝ col.

"A revised edition of this well-received book has been issued bringing additional up-to-date information to those interested in glass and the glass industry. Considered a standard reference on glass, the new book also includes a chapter on mechanical properties of glass, chapters on applications and sections on lamp-working and glass-to-metal seals. Production statistics have been brought up-to-date and there are more than 200 illustrations contained."

National glass budget, July 24, 1948, p.14. ¾ col.

"Presents an up-to-date survey of all phases of glass and the glass industry . . . Includes the history of glass, current statistics, physics and chemistry of the material, methods of manufacture, and application in the home, throughout industry, and to science and research . . . Will be of particular interest to glass technologists and glass-plant workers, to architects, engineers, designers, and executives in those industries where glass is used. Graduate and undergraduate students, studying ceramics and glass technology will find it of definite value, and it also contains a vast amount of practical information for the layman. Among the features of this new edition is the extremely comprehensive chapter on the mechanical properties of glass, the chapters on applications, and the sections on lamp-working and glass-to-metal seals."

Pierce, Willis C., & Haenisch, E. L. Quantitative analysis. Ed.3, revised. 520p. 1948. Wiley, New York, $3.75.

Analytical chemistry, Oct. 1948, p.987. ½ col.

"This reviewer considers the book as one of the outstanding fundamental texts in analytical chemistry. It is thoroughly modern and clearly written, and incorporates the writers' teaching experience with the textbook material. The authors are to be commended for their efforts in the revision of this excellent text." *William J. Tomsicek.*

Canadian chemistry and process industries, Sept. 1948, p.839. ⅝ col.

"Designed for use in a first-year course in quantitative analysis, and . . . contains all the material usually treated in a year's work. In the arrangement, however, the needs of the one-semester course have been kept in mind, and the material which is not treated in the first semester's work has been segregated in separate chapters . . . Divided into sections, in order to permit flexibility in teaching. Part I deals with fundamentals, the preparation of equipment, and the use of the analytical balance. After this section is completed, the teacher may proceed either with volumetric analysis, in Part II or with gravimetric analysis, in Part III. Each of these sections is independent of the other, and may be studied as a unit."

Chemical engineering, Sept. 1948, p.315. ⅛ col.

"Third edition of a fine text-book on quantitative analysis . . . Revised to bring the second edition, written eight years ago, up-to-date in analytical procedures. Several new procedures have been added, including a discussion on the use of organic precipitants. A new chapter on complex equilibria has also been added . . . Designed to serve as a text in a first-year college course and the authors have succeeded in preparing an excellent book for that purpose."

Purday, H. F. P. Diesel engine design. Ed.5, revised. 545p. 1948. Constable, London, 25s. net.

Mechanical world, Sept. 24, 1948, p.365. 1 col.

"Will . . . be warmly welcomed particularly by designers and draughtsmen engaged in the oil engine industry, for whom the book is primarily intended. However, the student and the engineer in general will find it a most useful acquisition since it is mainly a treatise on mechanical design . . . Has a most attractive

practical and workmanlike air, which is to be expected when it is appreciated that the author is a chief designer for one of our foremost engine builders . . . Very ably written, excellently illustrated and well produced, and an exhaustive bibliography and comprehensive index are included . . . Will deservedly maintain its position as a leading work of reference on all aspects of the compression-ignition engine." *W. W.*

Rigsby, Herbert P., & Groneman, C. H. Elementary and applied welding. 151p. Bruce Pub., Milwaukee, Wis., $2.

American metal market, Sept. 15, 1948, p.6. ⅛ col.

"Intended for those who are learning oxyacetylene and arc welding. The processes are excellently illustrated with diagrams and illustrations. Methods are simply and precisely presented step by step . . . Should be of value to the vocational student or to the home craftsman. Among the subjects covered are types of metals, welding equipment, and materials, safety practices, cutting, preparation of joints, welding in various positions and a list of about thirty projects. The material is presented in a clear cut and simple manner and should give the reader a mechanically-minded comprehension of the subject."

Welding journal, Sept. 1948, p.756. ¼ col.

"Contains material especially adaptable to the beginning student in both oxyacetylene and arc welding. Basic procedures are given and are fully illustrated with photographs and sketches so that the learner is guided methodically from the most simple to the more complicated processes involved in the projects. The informational material is restricted to industrial opportunities, commercial methods, tools and equipment, metals, and safety practices. The projects, or problems, have been designed to appeal to the industrial student and to the home craftsman."

Rose, Arthur, & Rose, Elizabeth. Distillation literature; index and abstracts 1941-1945. 221p. 1948. The Authors, 525 S. Gill St., State College, Pa., $5.

Chemical and engineering news, Sept. 20, 1948, p.2838. ⅛ col.

"'Intended to be a small start in getting together in one place a portion of the available literature in one important area of technical activity—namely, distillation.' The abstracts are arranged alphabetically by the authors and reference is given to *Chemical Abstracts* as well as to the original journal article. All phases of distillation are included, but obviously some subjects, such as distillation incidental to petroleum technology, are so complex that they could not adequately be covered in this publication. Indexes and cross references are as complete as possible, however, and a subject index and a substance index are included. The authors are to be highly commended for this compilation. An improved version of this compendium already in preparation for later and earlier years will be awaited with unusual interest."

Rowe, A. P. One story of radar. 208p. 1948. Cambridge Univ. Press, London, 8s. 6d.

British science news, v.1, no.11 1948, p.22. ½ col.

"Mr. Rowe was associated with radar from the beginning, and was Chief Superintendent of T.R.E. in wartime. His book is a personal reminiscence of how radar was evolved and the personalities responsible for it. So pervasive did the science become in its military applications, that to some extent this is a history of the war seen from a laboratory; for the U-boat campaign, the invasion threat to Britain, the mounting bomber offensive, and D-day itself are all reflected in its pages . . . Not a technical treatise, the descriptions of items of apparatus being confined to an account of why they were necessary, what they did, and, in the simplest terms, why they did it better than their predecessors." *B. K. C.*

Electronic engineering, Oct. 1948, p.338. ¾ col.

"All associated with radar and anyone interested in the problems of organisation encountered in scientific development and research on a large scale will wish to read this book. But it will also have a much wider appeal through its clear vigorous account of radar, to which our victory was largely due." *G. Bradfield.*

Scheer, Bradley T. Comparative physiology. 563p. 1948. Wiley, New York, $6.

Science, Oct. 1, 1948, p.365. ¾ col.

"While this useful textbook may be considered as a variation of the general physiology type, it was written from a somewhat different approach. The title emphasizes the fact that the objective is comparative physiology, and the treatment is more on a phylogenetic basis . . . This is not a handbook of comparative physiology but a textbook of moderate size. The objective and method of this type of comparative physiology, as the author states, are analogous to the fundamental methods of comparative anatomy. The book should thus be useful for students in zoology and general physiology." *Samuel Gelfan.*

Schutt, William H. Process engineering. 309p. 1948. McGraw, New York, $4.

Factory management and maintenance, Oct. 1948, p.256. ⅛ col.

"How to determine the selling price or direct labor cost of a product to be manufactured, how to set up production methods directly from the blueprint, are two of the topics considered . . . Also takes up the visualization of all types of manual processes for machine operation, how to use formulas for speeds and feeds of production machinery, and gives pointers on selection of materials, formulas for bending and channeling."

Materials & methods, Oct. 1948, p.178. ⅛ col.

"In this book process engineering refers to that phase of industrial engineering which determines the means, methods, and procedure of manufacturing an article economically. Emphasis is heavily on machining operations and their cost-estimating. Information is given on how to determine the selling price or direct-labor cost of an article to be manufactured; how to make accurate cost estimates and set up efficient production methods directly from the blueprint; how to select the proper material for economical production; and how to estimate the size of blanks for forming various products."

Shields, Bert A. Air pilot training. Ed.3, enlarged. 719p. 1948. McGraw, New York, $5.

U. S. air services, July 1948, p.14. ⅔ col.

"This edition lays greater stress on commercial and private flying than on purely military flying . . . Intended to give the reader enough information to pass the written examinations for private and commercial pilot licenses. It supplements the flying instructor in explaining the theory of flight and the reasons for applying the controls in the proper manner . . . Well-written, the author's style is clear and easy. The illustrations are well-chosen and pertinent. The chapters on radio and on meteorology are especially commendable and should be studied by every embryo pilot."

Shnidman, Louis, ed. Gaseous fuels; a digest of their properties, behavior and utilization. 368p. 1948. American Gas Assoc., New York, $7.50.

American gas journal, Sept. 1948, p.18. ½ col.

"A successor to 'Fuel-Flue Gases' published by the A. G. A. in 1940. The wide scope of this work should prove most valuable as a source of knowledge and reference. A comprehensive index gives ready access to the many subjects and technical items covered . . . Highly recommended for Technical men and managers in the gas field but also to students in colleges and universities. Many literature references append each chapter."

Snyder, Thomas Elliott. Our enemy the termite. Revised edition. 257p. 1948. Comstock Pub. Co., Ithaca, N. Y., $3.50.

Journal of forestry, Oct. 1948, p.775. ½ col.

"Based on 38 years of experience by the author in the Bureau of Entomology, U. S. Department of Agriculture, mostly in field, studying termites, and ways to prevent and remedy the damage done by them. The glossary of technical terms, and the descriptive illustrations are a great help to the reader . . . The first seven chapters contain an excellent discussion of termites, what they are, and how they live and reproduce. The second section of five chapters gives an up-to-date and thorough discussion of damage by termites and their control . . . This book is for those who are curious about the habits of the termite and how it lives, protects itself, and does millions of dollars of damage each year by eating a universal food—wood cellulose." *Everett R. Stanford.*

Soller, J. T., and others, ed. Cathode-ray tube displays. 746p. 1948. McGraw, New York, $10. (M.I.T. radiation laboratory series, v.22.)

Electrical world, Sept. 11, 1948, p.180. ⅛ col.

"A wide-variety of types of cathode-ray tubes was created and produced for wartime radar. Many of them can be adapted for use in laboratory studies and this . . . volume records in great detail the circuits that can draw upon the characteristics and controls to give the various screen pictures known as 'displays.' Indications of scope can be inferred from the following sampling of topics; beam focussing, rectangular wave generation, video amplifiers, triggers, scanning, video mapping."

Stewart, G. F. See Advances in food research.

Sutton, Albert A. Design and makeup of the newspaper. 483p. 1948. Prentice-Hall, New York, $7.65 (Schools, $5.75).

Inland printer, Sept. 1948, p.80. ⅝ col.

"Offers a thorough study of the entire subject of presenting news and advertising . . . 'The purpose of this book has been to bring together significant information that is essential to an understanding of the basic problems involved in the design and makeup of the newspaper. Not only has it been planned as a textbook . . . but also for practicing newspaper men and others interested in developing more proficiency in the subject' . . . Should appeal strongly not alone to newspaper workers but to all workers in the printing field."

Taylor, William T., & Weber, R. J. Laboratory manual of pharmacology. 151p. Saunders, Philadelphia, $1.90.

Drug & cosmetic industry, Sept. 1948, p.371. ¼ col.

"Young women graduating from high school frequently know little of mathematical principles and their application to practical situations. Too little time is given to laboratory work in the teaching of Materia Medica, with the result that practical application of new knowledge is neglected. The authors . . . have given consideration to these important points, and have laid stress on principles and their application. This manual is used in the teaching of students in the school of Nursing of Georgetown University, and it has proved to be sound educationally and professionally."

Teleky, Ludwig. Factory and mine hygiene. 342p. 1948. Columbia Univ. Press, New York, $4.50.

Mines magazine, Sept. 1948, p.39, 44. ⅛ col.

"The author, a physician and noted authority in the field of industrial hygiene, exposes the startling factory and mine safety and hygiene conditions existing in this country and in Europe. The source, results, and after-effects of diseases and accidents which are a direct result of poor working practices and inadequate safety and sanitary measures are discussed in detail."

Theodorsen, Theodore. Theory of propellers. 164p. 1948. McGraw, New York, $3.50.

Aeronautical engineering review, Oct. 1948, p.81. 1⅔ col.

"Dr. Theodorsen presents one of the most significant advancements in basic propeller theory since the publication, in 1929, of Dr. Sidney Goldstein's well-known paper on the optimum load distribution of lightly loaded propeller blades . . . The reviewer believes that this book presents a new and stimulating approach to the whole aerodynamic theory of propellers and should be useful to aeronautical engineers specializing in the propeller field. In order to appreciate fully this work, the reader should be familiar with the past literature of the classical propeller theory." *F. B. Stulen.*

Journal of the Royal Aeronautical Society, Sept. 1948, p.574. 11 l.

"An attractive book because it describes in detail the author's theory of propellers. The theory is based on the wake infinitely far behind the propeller and can be applied to problems not previously soluble by the momentum theory or its extensions. The propeller

problem is treated in exact terms for the wake, and the wake parameters are considered the primary ones, *e.g.*, the thrust coefficient is referred to the diameter of the wake helix far behind the propeller. The theory is developed for single and dual propellers and refers in considerable detail to the effect of interference. The application of the theory to propeller design is discussed in detail and excellent tables and diagrams are given . . . Excellently produced and can be warmly recommended to anyone interested in propeller theory and design."

Todd, J. A. Projective and analytical geometry. 289p. 1947. Pitman, London, 25s.

British science news, v.1, no.11 1948, p.22. ½ col.

"A very notable contribution to the literature on modern geometry and it is safe to prophesy that it will become one of the essential textbooks for every serious student of mathematics . . . Intended for use in the last two years of a university honours course and it will be particularly useful when the new syllabus for Special Honours Mathematics in the University of London becomes operative . . . A large number of examples are given, some to illustrate the methods at the ends of the relevant paragraphs, but the majority at the ends of the chapters . . . Very well printed and appears to be fairly free from misprints although a few have been detected." *B. A. E.*

Trist, P. J. O. Land reclamation. 178p. 1948. Faber, London, 15s. net.

Nature, Sept. 25, 1948, p.475. ⅔ col.

"Gives an excellent account of problems facing the officers of the war agricultural executive committees in their task of increasing food production during the War . . . Mr. Trist confines himself to the problems facing the Essex Committee, of which he was first a district officer and then the cultivations officer, in deciding which under-farmed or derelict areas should be reclaimed, and the method of reclamation to be used . . . The book has also a great historical value, for it gives a very good account of the workings of many war organisations, such as the set-up of the county war committees, the difficulties of employing and limitations in using the various types of labour that had to be drafted on to the land, and many other of the day-to-day problems that arise when a great effort is needed to increase food production." *E. W. Russell.*

Tyler, Chaplin. Chemical engineering economics. Ed.3. 321p. 1948. McGraw, New York, $4. (McGraw-Hill chemical engineering series.)

Chemical age, Aug. 14, 1948, p.227. ½ col.

"Although written for American conditions, it will certainly be appreciated in this country for its practical applications. The value of the book is enhanced by the inclusion of many figures and tables, a comprehensive bibliography and a full index. The volume will find a place in the libraries of chemical institutes and chemical works."

Chemical engineering progress, Aug. 1948, p.28. ⅝ col.

"This edition is somewhat different from the previous two, for the author has called upon fourteen other experts in the chemical field to write specific chapters or sections of chapters, while he remains the author of five. The result of this collaboration is a much-improved book, one with better balance and more insight into specific problems in the economic framework of the chemical field. Unfortunately, production figures are not available for recent years as the Census Bureau has not issued figures since the 1939 census . . . The theory behind each subject is covered quite adequately . . . The field owes great thanks to Chaplin Tyler for his efforts in making this book the excellent reference and text it is." *F. J. Van Antwerpen.*

Chemist, Oct. 1948, p.468. ⅓ col.

"A standard text on chemical engineering economics which covers the subject quite thoroughly, from the standpoint of making a new product pay. Written in a period of changing prices, the reader will need to supply the corrections for the newer price levels as they occur. The collaboration of fourteen experts brings in other viewpoints and broadens the appeal of the book. The facts are simply and concisely presented." *John A. Steffens.*

Tyler, F. Laboratory manual of physics. 207p. 1947. E. Arnold, London, 7s. 6d.

British science news, v.1, no.11 1948, p.23. ½ col.

"Intended for the use of students preparing for the various Higher School Certificate examinations and for candidates for open scholarship examinations at the British Universities . . . Would also be very useful to first-year physics students at universities and to students taking science and engineering courses at technical colleges. The experiments described in this comprehensive practical textbook can all be performed with the apparatus normally to be found in a well-equipped school laboratory. In some cases instructions are given as to how apparatus can be improvised . . . Can be recommended as likely to be of considerable assistance to both teacher and student of practical physics." *P. C. G.*

Van Voorhis, Stanley N., ed. Microwave receivers. 618p. 1948. McGraw, New York, $8. (M.I.T. radiation laboratory series, v.23.)

Electronics, Nov. 1948, p.234. 1 col.

"A comprehensive treatment of microwave receivers is found in this volume . . . Written in a clear, easily understood manner . . . Contains an excellent balance between theoretical and practical information . . . Illustrated with numerous photographs, circuit diagrams and curves . . . Should prove of great value to anyone interested in the design, test or maintenance of microwave receivers . . . Will enable the student to obtain a greater understanding of microwave receiver problems." *G. L. Beers.*

Proceedings of the I.R.E., Sept. 1948, p.1141. ¾ col.

"Intended to acquaint the reader with the large amount of information gathered, and the various techniques employed, by the members of the Radiation Laboratory in the solution of the problems they encountered in designing and constructing receivers for the microwave region . . . Covers work done not only at the Radiation Laboratory, but at other research laboratories as well . . . In general, the various topics discussed throughout the book are presented in a clear, concise, and readable manner . . . Since the receivers described . . . were intended primarily for radar use, the present-day microwave engineer will encounter many problems

that are not discussed in this book, as well as finding some material not applicable to his work; but he will find a large amount of material that he can use directly, and from the rest he will get many helpful leads. This book is recommended to him without reservation." *Karl G. Jansky.*

Wireless engineer, Sept. 1948, p.302. 1 col.

"Contains a great wealth of information on the theory, design and testing of microwave receivers . . . The treatment throughout is encyclopedic rather than didactic, and the book will therefore be more useful to the engineer and designer working actively in the field than to the student approaching it for the first time —perhaps a natural consequence of the multiple authorship. Familiarity with the subject is assumed tacitly . . . Can be thoroughly recommended to the receiver designer." *P. E. T.*

Verwey, E. J. W., and others. Theory of the stability of lyophobic colloids; the interaction of sol particles having an electric double layer. 205p. 1948. Elsevier, New York, $4.50.

Chemical and engineering news, Oct. 4, 1948, p.2988. ⅝ col.

"Should be in the hands of every colloid chemist interested in the stability of hydrophobic sols and emulsions." *Harry B. Weiser.*

Chemical engineering, Sept. 1948, p.318, 320. ¾ col.

"Aims to develop, as far as possible, a quantitative theory of the stability of hydrophobe colloids and suspensions, based essentially on a balancing of (1) mutual repulsions of particles due to interaction of two electrochemical double layers, and (2) attractions due to London-Van der Waals forces . . . Because of the basic nature of the principles treated, this book has much of profound interest to physicists, chemists, biologists and technologists . . . Well printed and bound." *Jerome Alexander.*

Chemist, Oct. 1948, p.467. 7 l.

"An advanced theory is developed for emulsions, hydrophobic colloids and suspensions, where in the electric-double layer concept is used. The authors are closely associated with the famous Van't Hoff Laboratories in Utrecht, Holland." *John A. Steffens.*

Nature, Aug. 28, 1948, p.315. 1 col.

"Contains the results of theoretical investigations on the problem which were carried out by the authors in the Netherlands during the war years. Some short and incomplete accounts of this work have appeared in various journals, but many of the details are published here for the first time. The book, therefore, has the character of a research monograph." *J. A. V. Butler.*

Vogt, William. Road to survival. 335p. 1948. William Sloane Associates, Inc., New York, $4.

Audubon magazine, Sept.-Oct. 1948, p.311. ½ col.

"Mr. Vogt has written an eloquent, grim, but always vivid portrayal of whether or not two billion people on earth can continue to survive with our daily population increase of 50,000 souls, and our continued destruction of the soil on which we depend for our daily bread. The basic premise in this book is the fact that all life depends on the earth's capacity to support life, and that the population of the world is steadily increasing while the productive capacity of the earth is steadily declining . . . Should not only be read by every man and woman in the Americas, but by those of Europe and other parts of the world. It will shock, frighten and infuriate many readers, but it is a courageous, honest, and brilliantly written preview of things to come as seen by a competent scientist."

Welch, Paul S. Limnological methods. 381p. 1948. Blakiston, Philadelphia, $7.

Military engineer, Oct. 1948, p.489. ⅔ col.

"Presents a comprehensive discussion of the numerous, diverse, and technical methods employed in scientific study of lakes, ponds, and streams with reference to hydrographical, physical, chemical, and biological conditions. The purpose of the volume is to present the essentials of those basic methods necessary for entry into the subject of limnology, limnological surveys of lakes and streams, and fundamental information upon which specialized researches depend." *A. A. S.*

Nature magazine, Oct. 1948, p.439. 10 l.

"Presents the essentials of those basic methods necessary for entry into the subject of limnology, for limnological surveys of lakes and streams, and provides fundamental information upon which specialized researches depend . . . Seeks to fill an existing gap in source material, since at present no single source of information now exists providing data on limnological methods."

White, Harvey E. Modern college physics. Revised edition. 787p. 1948. Van Nostrand, New York, $5.

American journal of physics, Sept. 1948, p.368. 1⅓ col.

"Crammed full of facts, some of which have never before appeared in textbooks on general college physics. The sections on atomic physics, electronics, and nuclear physics should be especially useful to teachers who are called on continually to answer the many questions of the beginner as well as inquiries from the casually interested in these fields . . . There is a wealth of material in this book to supply the needs of any full year course given for engineers, chemists, premedics, or the budding physicist. Also, chapters are of convenient length, illustrations plentiful and attractive, problems and questions useful . . . Professor White must be congratulated for the fine contribution which he has made to the business of teaching physics." *R. F. Paton.*

White, John M. The farmer's handbook. 440p. 1948. Univ. of Oklahoma Press, Faculty Exchange, Norman, Okla., $4.95.

Nature magazine, Oct. 1948, p.439. ⅓ col.

"Life is full of problems for the farmer, the gardener and the raiser of livestock. This book seeks to provide concise and up-to-date solutions for these problems . . . Covers grain crops, legumes and grasses, fiber and oil crops, other field crops, sugar and sirup crops, garden and truck crops, orchard and vine fruits, trees on the farm, berries, beef cattle, dairy cattle, hogs, horses and mules, sheep and goats, poultry and rabbits, feeds and feeding, soil conservation, beekeeping, fish and wildlife and farm engineering."

Whitmore, Eugene. See Aspley, John Cameron, & Whitmore, Eugene, ed.

Wiener, Meyer, ed. Ophthalmology in the war years. v.2: 1944-June 1946. 977p. 1948. Year Book Publishers, Chicago, $16.

Science, Oct. 8, 1948, p.394. ⅝ col.

"A review of the pertinent ophthalmic literature from January 1944 to June 1946 . . . Divided into 33 chapters, and each section is written by a different author. This feature is largely responsible for some repetition in the references by the various editors and also accounts for a lack of uniformity in presentation, but in spite of these minor defects this book is a valuable reference work. In it the busy practitioner can find the recent advances in ophthalmology clearly outlined . . . Will be of great usefulness to one reviewing any ophthalmological subject and should be in every oculist's library." *John H. Dunnington.*

Wilbur, John B., & Norris, C. H. Elementary structural analysis. 523p. 1948. McGraw, New York, $6.

Concrete and constructional engineering, Aug. 1948, p.248. ½ col.

"The writers . . . deal only with the theory of structures insofar as the text is limited mainly to 'stress analysis,' by which the authors mean the calculation of bending moments and direct and shearing forces. The determination of the stresses induced by these moments and forces, and methods of design, are admittedly outside the scope of this book . . . In common with many books on structural theory, the types of structures considered, except dams and retaining walls, are principally those usually erected in steel although, of course, the theory of indeterminate structures is applicable alike to reinforced concrete and steel."

Product engineering, Sept. 1948, p.188, 190. ⅓ col.

"Prepared for students in civil engineering. Three types of structures are exhaustively treated; beams, trusses and framed members. Also of importance to the civil engineer are the chapters on cables, gravity structures and the use of models for structural studies. More space than usual has been given to the discussions of fundamentals."

Wise, S. J. Electric clocks. 150p. 1948. Heywood & Co., Ltd., Drury House, Drury Lane, Russell St., London, W.C.2, 10s. 6d.

Electrical review, Aug. 13, 1948, p.244. ¼ col.

"The principles and working of systems in current use are described, the subject being covered in ten chapters. The first three are devoted to the elementary principles of electricity and of frequency control. Chapter four deals with some fifteen different types of battery driven and electrically wound clocks, followed by chapters on clock motors, synchronous clocks and turret clocks. The remaining three chapters cover the repair and maintenance of d.c. clocks, the repair of synchronous clocks and electric clock installation. The many illustrations are very well prepared and do much to make clear a number of points, which, owing to the amount of ground covered, are not always fully, or clearly, described in the text." *S. F. P.*

Instrument practice, Sept. 1948, p.470. 1 col.

"The first two chapters deal with fundamental electrical matters . . . Chapter III describes the frequency control carried out on the turbo alternator at a power station by a particular manufacturer's equipment, and in Chapter IV the various types of electric clocks are described in a concise manner . . . The general types of electric motors used for driving electric clocks follows [sic] in the next chapter (V) . . . More detailed data is [sic] given in Chapter VI on the self starting and hand started synchronous types . . . Two chapters, VII and VIII, deal with the repair and maintenance of electric clocks and some line diagrams are given to assist in repair work. The bigger type of clock for public buildings is given the ninth chapter to itself . . . The final chapter deals with the installation of electric clocks in factories and offices and is well illustrated with schematic diagrams."

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